

***What Is Claimed Is:***

1. An isolated nucleic acid molecule comprising a polynucleotide having a nucleotide sequence at least 95% identical to a sequence selected from the group consisting of:

5 (a) a nucleotide sequence encoding a polypeptide comprising amino acids from about -20 to about 129 in SEQ ID NO:2;

(b) a nucleotide sequence encoding a polypeptide comprising amino acids from about -19 to about 129 in SEQ ID NO:2;

10 (c) a nucleotide sequence encoding a polypeptide comprising amino acids from about 1 to about 129 in SEQ ID NO:2;

(d) a nucleotide sequence encoding a polypeptide having the amino acid sequence encoded by the cDNA clone contained in ATCC Deposit No. 97519;

15 (e) a nucleotide sequence encoding the mature chemokine  $\beta$ -15 polypeptide having the amino acid sequence encoded by the cDNA clone contained in ATCC Deposit No. 97519; and

(f) a nucleotide sequence complementary to any of the nucleotide sequences in (a), (b), (c), (d), or (e).

20 2. The nucleic acid molecule of claim 1 wherein said polynucleotide has the complete nucleotide sequence in SEQ ID NO:1.

3. The nucleic acid molecule of claim 1 wherein said polynucleotide has the nucleotide sequence in SEQ ID NO:1 encoding the chemokine  $\beta$ -15 polypeptide having the complete amino acid sequence in SEQ ID NO:2.

25 4. The nucleic acid molecule of claim 1 wherein said polynucleotide has the nucleotide sequence in SEQ ID NO:1 encoding the mature chemokine  $\beta$ -15 polypeptide having the amino acid sequence in SEQ ID NO:2.

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5. The nucleic acid molecule of claim 1 wherein said polynucleotide has the complete nucleotide sequence of the cDNA clone contained in ATCC Deposit No. 97519.

6. The nucleic acid molecule of claim 1 wherein said polynucleotide has the nucleotide sequence encoding the chemokine  $\beta$ -15 polypeptide having the complete amino acid sequence encoded by the cDNA clone contained in ATCC Deposit No. 97519.

7. The nucleic acid molecule of claim 1 wherein said polynucleotide has the nucleotide sequence encoding the mature chemokine  $\beta$ -15 polypeptide having the amino acid sequence encoded by the cDNA clone contained in ATCC Deposit No. 97519.

8. An isolated nucleic acid molecule comprising a polynucleotide which hybridizes under stringent hybridization conditions to a polynucleotide having a nucleotide sequence identical to a nucleotide sequence in (a), (b), (c), (d), (e), or (f) of claim 1 wherein said polynucleotide which hybridizes does not hybridize under stringent hybridization conditions to a polynucleotide having a nucleotide sequence consisting of only A residues or of only T residues.

9. An isolated nucleic acid molecule comprising a polynucleotide which encodes the amino acid sequence of an epitope-bearing portion of a chemokine  $\beta$ -15 polypeptide having an amino acid sequence in (a), (b), (c), (d), or (e) of claim 1.

10. A method for making a recombinant vector comprising inserting an isolated nucleic acid molecule of claim 1 into a vector.

11. A recombinant vector produced by the method of claim 10.

<sup>37</sup>  
~~12.~~ A method of making a recombinant host cell comprising introducing the recombinant vector of claim ~~11~~<sup>36</sup> into a host cell.

<sup>38</sup>  
~~13.~~ A recombinant host cell produced by the method of claim ~~12~~<sup>37</sup>.

<sup>39</sup>  
5 ~~14.~~ A recombinant method for producing a chemokine  $\beta$ -15 polypeptide, comprising culturing the recombinant host cell of claim ~~13~~<sup>38</sup> under conditions such that said polypeptide is expressed and recovering said polypeptide.

10 ~~15.~~ An isolated chemokine  $\beta$ -15 polypeptide having an amino acid sequence at least 95% identical to a sequence selected from the group consisting of:

- 15 (a) amino acids from about -20 to about 129 in SEQ ID NO:2;  
(b) amino acids from about -19 to about 129 in SEQ ID NO:2;  
(c) amino acids from about 1 to about 129 in SEQ ID NO:2;  
(d) the amino acid sequence of the chemokine  $\beta$ -15 polypeptide having the amino acid sequence encoded by the cDNA clone contained in ATCC Deposit No. 97519;  
20 (e) the amino acid sequence of the mature chemokine  $\beta$ -15 polypeptide having the amino acid sequence encoded by the cDNA clone contained in ATCC Deposit No. 97519; and  
(f) the amino acid sequence of an epitope-bearing portion of any one of the polypeptides of (a), (b), (c), (d), or (e).

25 ~~16.~~ An isolated antibody that binds specifically to a chemokine  $\beta$ -15 polypeptide of claim ~~15~~.

~~17.~~ An isolated nucleic acid molecule comprising a polynucleotide encoding a chemokine  $\beta$ -15 polypeptide wherein, except for at least one

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conservative amino acid substitution, said polypeptide has a sequence selected from the group consisting of:

(a) a nucleotide sequence encoding a polypeptide comprising amino acids from about -20 to about 129 in SEQ ID NO:2;

(b) a nucleotide sequence encoding a polypeptide comprising amino acids from about -19 to about 129 in SEQ ID NO:2;

(c) a nucleotide sequence encoding a polypeptide comprising amino acids from about 1 to about 129 in SEQ ID NO:2;

(d) a nucleotide sequence encoding a polypeptide having the amino acid sequence encoded by the cDNA clone contained in ATCC Deposit No. 97519;

(e) a nucleotide sequence encoding the mature chemokine  $\beta$ -15 polypeptide having the amino acid sequence encoded by the cDNA clone contained in ATCC Deposit No. 97519; and

(f) a nucleotide sequence complementary to any of the nucleotide sequences in (a), (b), (c), (d), or (e).

18. An isolated chemokine  $\beta$ -15 polypeptide wherein, except for at least one conservative amino acid substitution, said polypeptide has a sequence selected from the group consisting of:

(a) amino acids from about -20 to about 129 in SEQ ID NO:2;

(b) amino acids from about -19 to about 129 in SEQ ID NO:2;

(c) amino acids from about 1 to about 129 in SEQ ID NO:2;

(d) the amino acid sequence of the chemokine  $\beta$ -15 polypeptide having the amino acid sequence encoded by the cDNA clone contained in ATCC Deposit No. 97519;

(e) the amino acid sequence of the mature chemokine  $\beta$ -15 polypeptide having the amino acid sequence encoded by the cDNA clone contained in ATCC Deposit No. 97519; and

(f) the amino acid sequence of an epitope-bearing portion of any one of the polypeptides of (a), (b), (c), (d), or (e).

19. A method for treatment of an individual in need of an increased level of chemokine  $\beta$ -15 activity comprising administering to said individual a composition comprising an isolated polypeptide of claim 15.

5 20. A method useful during the diagnosis of a disorder of the thymus in an individual comprising:

(a) measuring chemokine  $\beta$ -15 gene expression level in cells or body fluid of said individual;

10 (b) comparing the chemokine  $\beta$ -15 gene expression level of said individual with a standard chemokine  $\beta$ -15 gene expression level, whereby an increase or decrease in the chemokine  $\beta$ -15 gene expression level of said individual compared to said standard expression level is indicative of a thymus disorder.

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